

**SC series**  
Standard product

**SA series**  
Large capacitance miniaturized

**SL series**  
5mm in height products

**SH series**  
Long Life product

**SG series**  
Specially designed for audio

**SS series**  
Miniaturized products

**SP series**  
Large Capacitance Low ESR

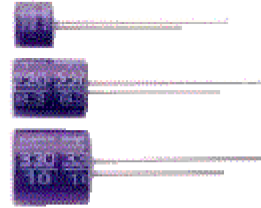
**SM series**  
Horizontal SMD

**SN series**  
Horizontal Miniaturized SMD

**NewSV series**  
New Vertical SMD

**SS Series**

**Miniaturized Products from SC, SA and SL series**



SS series is miniaturized products s SC, SA and SL series.  
Where a compact design suitable for switching power supplies, etc.

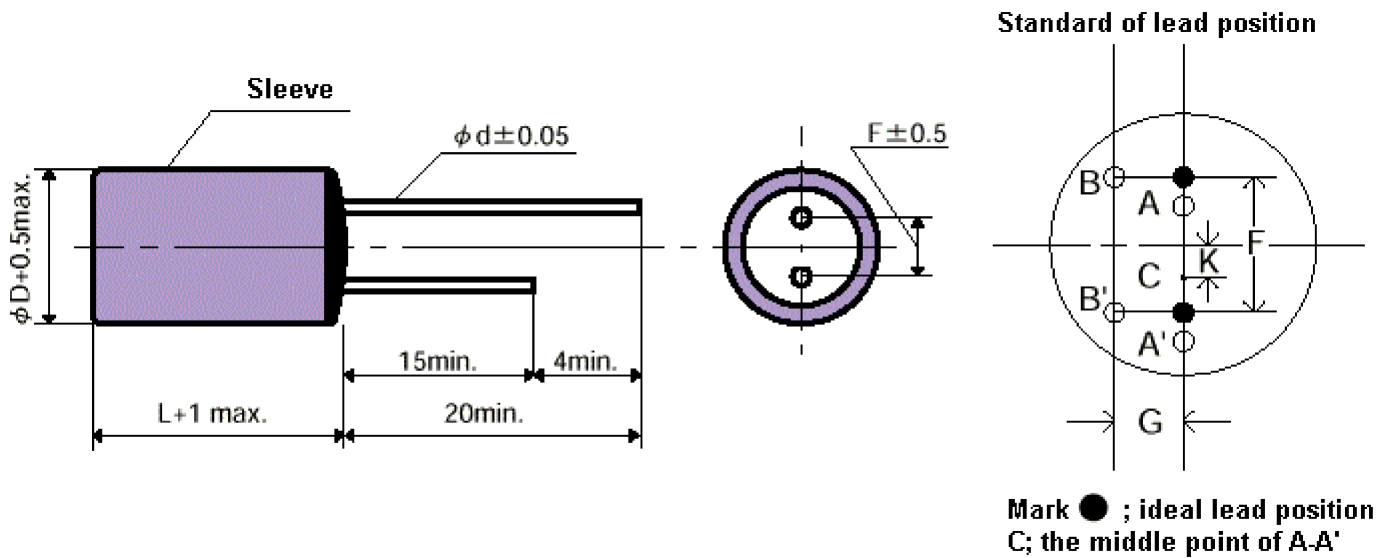
Sleeve color : Purple  
Marking : Polarity(Cathode) ,  
( White ) Rated voltage,  
Capacitance , Series name  
**SANYO, OS-CON** , Lot. No.  
Max. operating temp. (105°C)

**Specifications**

Items		Characteristics		
1	Operating temperature	- 55degrees C ~ +105degrees C		
2	Capacitance tolerance(120Hz)	M( ± 20%)		
3	Tangent of loss angle(120Hz)	Value in Table 6 or less		
4	Leakage current(uA/2min.)(max.) ※ 1	0.05CV		
5	ESR(100k ~ 300kHz)	Value in Table 6 or less		
6	Temperature characteristics Impedance ratio at 100kHz	-55degrees C	Z/Z 20degrees C	1.0 ~ 1.25
		+105degrees C	Z/Z 20degrees C	0.75 ~ 1.0
7	High-temperature load 105degrees C , 1000Hrs. Rated voltage applied	ΔC/C	Within ± 20%	
		Tangent of loss angle	1.5 times of Item 3 or less	
		Leakage current	Item 4 or less	
8	Moisture resistance (60degrees C,90 ~ 95%RH,1000Hrs.no voltage)	ΔC/C	Within ± 20%	
		Tangent of loss angle	2 times of Item 3 or less	
		Leakage current	Item 4 or less	
9	Reverse voltage guarantee	Temporary:less than 20% of the rated voltage, Continuous:less than 10% of the rated voltage.		

※ 1 If any doubt arises measure the current after applying voltage(voltage treatment) for 30 minutes at 105degrees C.  
The rated voltage should be applied for all WV.

**Dimensions**



Size Code	A'	B'	C'	D	E	F
$\phi D * L (\text{mm})$	4.0*5.0	5.0*5.0	6.3*5.0	6.3*9.8	8*10.5	10*10.5
F(mm)	$1.5 \pm 0.5$	$2.0 \pm 0.5$	$2.5 \pm 0.5$	$2.5 \pm 0.5$	$3.5 \pm 0.5$	$5.0 \pm 0.5$
$\phi d (\text{mm})$	0.45	0.45	0.45	0.60	0.60	0.60
G max.(mm)	0.5	0.5	0.5	0.5	0.8	0.8
K max.(mm)	0.5	0.5	0.5	0.5	0.8	0.8

## Size List

WV(SV)	4.0WV (4.6SV)	6.3WV (7.2SV)	10WV (11.5SV)	16WV (18.4SV)	20WV (23SV)
2.2uF	-	-	-	-	A'
3.3uF	-	-	-	-	A'
4.7uF	-	-	-	A'	B'
6.8uF	-	-	-	A'	B'
10uF	-	-	A'	B'	C'
15uF	-	A'	-	B'	C'
22uF	-	-	B'	-	C'
33uF	-	B'	-	C'	-
47uF	-	-	-	-	D
68uF	C'	-	-	D	-
100uF	-	-	D	-	E
150uF	D	-	E	-	F
220uF	-	E	-	-	-
330uF	-	-	F	-	-
470uF	F	-	-	-	-

Table 6 SS Series Characteristics List

Temperature coefficient for ripple current

Ambient Temp.	~ +45degrees C	+65degrees C	+85degrees C	+95degrees C	+105degrees C
Coefficient	1.0	0.85	0.7	0.4	0.25

Size Code	Part Number ※1	Rated voltage (V)	Nominal Capacitance (uF)	ESR 100kHz ~ 300kHz (mohm)(max.)	Maximum allowable ripple current (mArms) ※2	Tangent of loss angle (max.)	Leakage current (uA) ※3
<b>A'</b>	20SS2R2M	20	2.2	400	450	0.05	2.20
	20SS3R3M	20	3.3	400	500	0.06	3.30
	16SS4R7M	16	4.7	400	540	0.06	3.76
	16SS6R8M	16	6.8	400	540	0.06	5.44
	10SS10M	10	10	350	560	0.06	5.00
	6SS15M	6.3	15	350	560	0.06	4.73
<b>B'</b>	20SS4R7M	20	4.7	250	720	0.05	4.70
	20SS6R8M	20	6.8	180	745	0.05	6.80
	16SS10M	16	10	150	780	0.05	8.00
	16SS15M	16	15	150	780	0.05	12.00
	10SS22M	10	22	150	780	0.05	11.00
	6SS33M	6.3	33	150	780	0.05	10.40
<b>C'</b>	20SS10M	20	10	100	1150	0.06	10.00
	20SS15M	20	15	100	1230	0.06	15.00
	20SS22M	20	22	100	1230	0.06	22.00
	16SS33M	16	33	100	1230	0.06	26.40
	4SS68M	4	68	70	1430	0.06	13.60
<b>D</b>	20SS47M	20	47	60	1830	0.06	47.00
	16SS68M	16	68	50	2000	0.07	54.40
	10SS100M	10	100	40	2100	0.07	50.00
	4SS150M	4	150	40	2100	0.08	30.00
<b>E</b>	20SS100M	20	100	30	2740	0.07	100.00
	10SS150M	10	150	30	2780	0.07	75.00
	6SS220M	6.3	220	30	3000	0.07	69.30
<b>F</b>	20SS150M	20	150	30	3200	0.07	150.00
	10SS330M	10	330	25	3500	0.07	165.00
	4SS470M	4	470	25	3500	0.07	94.00

※1	Capacitance tolerance:M; ±20%
※2	100kHz, +45degrees C
※3	After 2 minutes